

10/822,352

VMTR/03DV

In the Specification

Please replace the paragraph beginning in page 1 with the following.

Cross-Reference to Related Applications

This application is a divisional of U.S. Patent Application Serial No. 10/164,460, filed June 6, 2002, now U.S. Patent No. 6,720,551 allowed, which is a divisional of U.S. Patent Application Serial No. 09/824,452, filed on April 2, 2001, now U.S. Patent No. 6,410,907 and which is a continuation of U.S. Patent Application Serial No. 09/398,698, filed on September 20, 1999, now U.S. Patent No. 6,246,052, issued June 12, 2001, entitled "Flexure Assembly For A Scanner."

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Please replace the paragraph beginning in page 10 at line 4 with the following.

Referring now to the drawings, Figure 1 illustrates generally a flexure device 20 having a frame or support structure 22 and a flexure carriage assembly 24 rigidly affixed to and supported by the frame. The carriage assembly 24 includes a carriage 25 and also includes a pair of piezoelectric assemblies 26 each having opposed distal end couplers 28 fixed to the frame 22. The piezoelectric assemblies 26 have a central coupler 30 fixed to a translating section 29 of the flexure carriage 25. In general, the frame or support structure 22 can be a separate frame element as is illustrated in Figure 1 that is further attached to a suitable instrument or device. Alternatively, the frame 22 can be an integral portion of the instrument or device (not shown). The piezoelectric elements 26 are energized from a source of electric energy (also not shown) and, in accordance with known principles of such elements, the piezoelectric assemblies 26 move according to the applied energy. Since the elements have a central coupler 30 coupled to the translating section 29 of the flexure carriage 25, the translating section as described in detail below, moves in accordance with the motion of the piezoelectric assemblies 26. As described and shown herein, the movement of the piezoelectric assemblies 26 and the translating section 29 of the flexure carriage 25 is highly precise and has a relatively large range of motion. However, as discussed above ~~discussed above~~, the typical and desirable range of motion for such a device is small in reality, for example, on the order of one Å to about a few hundred μ.

Please replace the paragraph beginning in page 12 at line 3 with the following.

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With that in mind, Figure 2A illustrates the flexure carriage assembly 24 and Figure 2B illustrates the carriage 25. The carriage 25 includes four elongate vertical columns disposed parallel to one another and spaced equal distance from one another. Each of the elongate columns includes a first end, herein designated as a top end and a second end, herein designated as a bottom end. The four elongate columns are identified herein for simplicity as 32A, 32B, 32C and 32D. The respective top ends are identified as 34A, 34B, 34C and 34D. The respective bottom ends 36 are represented by 36A, 36B ~~3613~~, 36C and 36D. Each of the elongate columns is essentially the same length and oriented so that each of the top ends terminate in the same plane relative to one another and each of the bottom ends terminate in the same plane relative to one another.

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Please replace the paragraph beginning in page 16 at line 6 with the following.

As best illustrated in Figure 2A, a flexure 50 is disposed at each top end 34 A-D ~~AD~~ and each bottom end 36 A-D between the respective elongate columns 32 A-D and cross members 38 A-D and 40 A-D. Each flexure 50 disposed at the top ends 34 of the elongate columns 32 is oriented so that all interior webs 60 are oriented in the same direction relative to one another and all exterior webs 62 are oriented in the direction relative to one another. Each of the flexures 50 disposed at the bottom ends 36 of the elongate columns 32 is also oriented identically relative to one another. Each flexure 50 disposed at opposite ends of each of the elongate columns 32 A-D are preferably oriented as mirror images of one another to provide symmetry in the construction of the carriage 25. For example, the flexures 50 on ends 34A and 36A of the elongate column 32A each have the exterior material webs 62 oriented parallel relative to one another and have the interior material webs 60 oriented parallel relative to one another.